

REMARKS

Claims 1-6 are rejected under 35 U.S.C. Section 112, first paragraph, as allegedly not being enabling for "any workpiece." Claims 1, 2 and 5 are rejected under 35 U.S.C. Section 102(b) as being anticipated by Monteath (U.S. Patent 3,350,223). Claims 3-4 are rejected under 35 U.S.C. Section 103(a) as being unpatentable over Monteath, and claim 6 is rejected under 35 U.S.C. Section 103(a) as being unpatentable over Monteath in view of Fletcher, Jr. et al. (U.S. Patent 5,845,684).

The foregoing rejections are respectfully disagreed with, and are traversed below.

Regarding the Examiner's rejection under 35 U.S.C. Section 112, Applicant asserts that the present claims are sufficiently enabled. However, independent claim 1 has been further clarified to specify that the workpiece is a gas turbine engine aircraft component, in the interest of advancing the prosecution of the application and as suggested by the Examiner. Accordingly, the Examiner's rejection under 35 U.S.C. Section 112 should be reconsidered and withdrawn.

Independent claim 1 is directed to a method of cleaning a workpiece comprising:

providing a mobile flushing unit and servicing the workpiece sequentially as follows:

connecting a flexible hose of the mobile flushing unit to one end of the workpiece and connecting another flexible hose of the mobile flushing unit to a second end of the workpiece, wherein the workpiece is a gas turbine aircraft engine component;

flowing compressed air through each hose and the workpiece;

pumping a cleaning fluid through each hose and the workpiece for a predetermined amount of time;

ceasing cleaning fluid flow, followed by purging with air to remove the cleaning fluid from the workpiece;

pumping water through each hose and the workpiece for a predetermined amount of time;

ceasing water flow, following by another purge with air to remove the water from the workpiece; and

disconnecting each hose from the workpiece.

Claims 3-6 depend from claim 1 and recite further advantageous features of the above claimed method.

Applicant asserts that the cited references do not disclose nor suggest the presently claimed invention, whether they are viewed alone or in combination. In particular, the Fletcher, Jr. et al. reference is directed to flushing coolant from automobile radiators and refilling them with new or recycled coolant. (Abstract, emphasis added).

In contrast, Applicant's claimed invention is directed to a method of cleaning a gas turbine aircraft engine component. Fletcher, Jr. et al. provide no teaching or suggestion regarding any cleaning method for gas turbine aircraft engine components, and one skilled in the art would not be motivated to look to Fletcher, Jr. et al. for guidance. Fletcher, Jr. et al. is merely directed to a fluid transfer apparatus and method for automobiles. (Col. 1, lines 1-5).

Similarly, Monteath, whether viewed alone or in combination with Fletcher, Jr. et al., does not disclose nor suggest the present claims. That is, Monteath is directed to a method for cleaning the liquid cooling system of a internal combustion engine of automobiles. In particular, Monteath provides a method of cleaning a cooling system of an internal combustion engine of an automobile which will simultaneously clean the engine block, the radiator, the heater, and any auxiliary components such as the cooling system of the automatic transmission and the torque converter. (Col. 2, lines 46-51). Monteath is not at all concerned with the cleaning of any gas turbine aircraft engine components, such as the oil scavenge tube of a gas turbine engine component. In Monteath's "Operation summary," an "automobile having the engine cooling system to be cleaned is driven into close proximity with [the] device and the top hose between the radiator and engine block removed." (Col. 8, lines 11-20). Next, Monteath discloses that the thermostat of the cooling system is removed from the lower hose and the lower hose is replaced. Thereafter, hoses 115 and 116 are connected to the engine block and radiator from which the top hose was removed. (Col. 8, lines 16-29).

In further contrast to the presently claimed invention, Monteath discloses the simultaneous introduction of air and water into the cooling system of an automobile. See Column 8, lines 44-62. In contrast to Monteath, Applicant's claimed invention can be advantageously employed to clean many components of a gas turbine engine, and is particularly useful in the cleaning of oil scavenge tubes.

Monteath, alone or in combination with Fletcher, Jr. et al.:

does not disclose not suggest any method of cleaning a workpiece wherein the workpiece is gas turbine aircraft engine component such as an oil scavenge tube;

does not disclose not suggest connecting a flexible hose of a mobile flushing unit to one end of a gas turbine engine component and connecting another to a second end of the gas turbine engine component;

does not disclose nor suggest Applicant's claimed method of sequential steps of:
flowing compressed air through each hose and the workpiece;
pumping a cleaning fluid through each hose and the workpiece for a predetermined amount of time;

ceasing cleaning fluid flow, followed by purging with air to remove the cleaning fluid from the workpiece;

pumping water through each hose and the workpiece for a predetermined amount of time;

ceasing water flow, following by another purge with air to remove the water from the workpiece; and

disconnecting each hose from the workpiece.

Applicant respectfully asserts that there is no teaching, suggestion or motivation that would lead one of ordinary skill in the art to combine and then modify the teachings of the cited references in an attempt to arrive at the present claims. Without such a teaching or suggestion, the invention may only be considered obvious in hindsight, which is an improper basis for rejection.


Additionally, the Office Action indicates at page 1 that claims "1-6" are pending and that the Action is responsive to the communication of March 12, 2004. Applicant respectfully points

out that claims 1-10 are pending in the subject application. Applicant filed a Response to Restriction Requirement on November 16, 2004 electing, with traverse, claims 1-6 for prosecution. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the requirement for restriction.

All issues raised by the Examiner having been addressed, the subject patent application is believed to be in condition for immediate allowance. Accordingly, the Examiner is respectfully requested to reconsider and remove all of the outstanding rejections and to pass this patent application to issuance.

A call to the undersigned attorney at the telephone number listed below would be appreciated should the Examiner have any questions or believe that a discussion would advance the prosecution of the application.

Respectfully submitted:


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4/19/05
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